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REPORT OF A FIVE-STATE OCCUPATIONAL EDUCATION RESEARCH AND DEVELOPMENT PLANNING CONFERENCE.

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IN NOVEMBER 1966 A CONFERENCE WAS HELD TO (1) EXCHANGE INFORMATION ABOUT ONGOING AND PLANNED RESEARCH AND DEVELOPMENT ACTIVITIES IN IOWA, MINNESOTA, NORTH DAKOTA, SOUTH DAKOTA, AND WISCONSIN, (2) EXPLORE OPPORTUNITIES FOR COORDINATING ACTIVITIES, (3) DEVELOP A PRIORITY LIST OF CURRENT SIGNIFICANT PROBLEMS IN THE REGION, (4) SELECT A HIGH-PRIORITY OCCUPATIONAL EDUCATION PROBLEM FOR A REGIONWIDE COOPERATIVE RESEARCH AND DEVELOPMENT PROJECT, AND (5) APPOINT A PLANNING ADVISORY COMMITTEE. DEVELOPING THE ECONOMIC, SOCIOLOGICAL, AND PSYCHOLOGICAL CRITERIA FOR EVALUATING THE SUCCESS OF VOCATIONAL PROGRAMS WAS THE PROBLEM CHOSEN. IN ORDER TO INSURE THAT THE STUDY WOULD HAVE IMMEDIATE APPLICABILITY TO OPERATING VOCATIONAL PROGRAMS, IT WAS DECIDED TO UTILIZE IT IN AN ACTUAL EVALUATION OF VOCATIONAL PROGRAMS. A LIST OF 27 PRIORITY PROBLEMS IS INCLUDED. (MS)

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Jerome Moss, Jr.
Conference Chairman

University of Minnesota, Minneapolis, Minnesota

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REPORT OF A

FIVE-STATE OCCUPATIONAL EDUCATION

RESEARCH AND DEVELOPMENT PLANNING CONFERENCE

Jerome Moss, Jr.
Conference Chairman

Minnesota Research Coordination Unit in Occupational Education

University of Minnesota

Minneapolis, Minnesota

January, 1967

BACKGROUND OF THE CONFERENCE

With the recent general recognition of the importance of occupational education to the social and economic growth of the nation, there has come a substantial increase in the availability of funds for research to improve the quality of vocational programs. Federal funds have been used to encourage studies with national import and to create research and development centers with nation-wide concerns. State coordinating units have been formed to stimulate and facilitate projects and to disseminate findings pertinent to the state. However, until the passage of legislation permitting the development of regional educational centers, there has been a serious gap in the availability of funds for, and the mechanism necessary to coordinate, research and development projects with special region-wide value. This deficiency has been aggravated by a lack of voluntary coordination among occupational education researchers and research organizations.

The creation of the Upper Midwest Regional Educational Laboratory provided both the incentive and the opportunity for an initial act of cooperative planning among occupational education research and development agencies in the region. At the invitation of the Director of the Planning Study for UMREL, occupational educators representing research organizations in four states of the region met in March, 1966 to formulate recommendations concerning potential Laboratory functions, programs and structure. Concomitant, but very significant, outcomes of that meeting included the identification of a considerable number of problem areas of mutual concern to the states represented, and a recognition of the desirability and feasibility of cooperative activities to serve common ends.

Consequently, in the Summer of 1966, the Minnesota Research Coordination Unit in Occupational Education submitted a proposal to the newly-established Upper Midwest Regional Educational Laboratory requesting funds to carry out the following activities in three-phases:

Phase I. Convene selected representatives of the five-state region's major resources for research and development in occupational education (November, 1966) for the purposes of:

A. exchanging information about ongoing and planned R & D activities within each state

B. exploring opportunities for coordinating existing and planned R & D activities within each state

C. developing a priority list of current, significant occupational education problems in the Upper Midwest Region

D. selecting and examining a high priority occupational education problem in the Region suitable for planning a region-wide, cooperative R & D project

E. appointing a Planning Advisory Committee

Phase II. Under the direction of a Planning Project Director,[1] with the advice of the Planning Advisory Committee, develop a complete, written proposal for a cooperative, region-wide study of the problem selected at the November conference (December-April, 1966-67).

Phase III. Reconvene the members of the November conference, supplemented by representatives from other appropriate organizations, to review, revise and approve the written proposal, and to recommend appropriate sources for funding the conduct of the proposed study (April, 1967).

The total project was approved by UMREL in October, 1966, and on November 28 and 29 the following sixteen persons met in Minneapolis, Minnesota to carry out Phase I:

Iowa

Trevor G. Howe, Associate Professor of Education, Iowa State University, and formerly Director, Occupational Research and Development Coordination Unit

Robert W. Thomas, Associate Professor of Economics, and Chairman, Strategic Intelligence Unit, Iowa State University

Kenneth M. Wold, Director, Occupational Research and Development Coordination Unit, Division of Vocational Education, State Department of Public Instruction

Minnesota

Jerome Moss, Jr., Professor of Industrial Education, and Co-director, Minnesota Research Coordination Unit in Occupational Education, University of Minnesota

Howard F. Nelson, Professor and Chairman of Industrial Education, and Co-director, Minnesota Research Coordination Unit in Occupational Education, University of Minnesota

Robert R. Randleman, Assistant Professor of Industrial Education, and Planning Project Director, University of Minnesota

Howard C. Rosenwinkel, State Supervisor for Program Development, Vocational Division, State Department of Education

North Dakota

Clifton H. Matz, Assistant Director, Center for Research in Vocational and Technical Education, University of North Dakota

Elywn H. Nagel, Director, Center for Research in Vocational and Technical Education, University of North Dakota

South Dakota

Donald Lindahl, Director, Lake Area Vocational School

E. B. Oleson, State Director of Vocational Education, Division of Vocational Education, State Department of Public Instruction

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[1] Dr. Robert R. Randleman, Assistant Professor of Industrial Education, University of Minnesota.

South Dakota
Thomas C. Stone, Assistant Professor and Chairman, Division of Vocational and Industrial Education, Southern State College

Wisconsin
Roland Krogstad, Director, Research Coordinating Unit, State Board of Vocational and Adult Education

J. Kenneth Little, Professor of Educational Administration, and Co-director, Center for Studies in Vocational and Technical Education, University of Wisconsin

Robert Ristau, Program Administrator, Vocational Education, Department of Public Instruction

Richard W. Whinfield, Center for Studies in Vocational and Technical Education, University of Wisconsin

OUTCOMES OF THE CONFERENCE

The November, 1966 Conference (Phase I of the three-phase planning project funded by the Upper Midwest Regional Educational Laboratory) was held for the five purposes stated in the previous section of this report. The results of the conference are therefore organized and reported, below, in terms of those purposes.

A. Exchanging information about ongoing and planned R & D activities, and

B. Exploring opportunities for coordinating existing and planned R & D activities within each state

As a result of the exchange of information about completed, ongoing and planned activities within each state, it became evident that failure to communicate with each other could have proved costly. For example, studies that had been completed by some states were discovered to be directly useful to other states. Further, in at least one instance, completely unnecessary replication was being contemplated; three states were independently preparing to undertake identical studies, and that same study had just been completed in a fourth state. The participants agreed to keep each other more closely informed in the future through complete and prompt reporting of their ongoing and planned activities.

It was also decided that, in the future, serious consideration should be given to the conduct of regional, rather than statewide, curriculum development projects, occupational surveys, and mobility studies.

C. Developing a priority list of current, significant occupational education problems in the Upper Midwest Region

Since the list of problems to be developed was to apply to the region as a whole, it was decided that priorities should be dependent primarily upon the degree of mutual concern evidenced among the five states about each problem, and secondarily upon the relative critical value of problems within categories of mutual concern.

Consequently, the procedure adopted for developing a list of problems and assigning priorities was as follows:

(1) In advance of the November meeting, conferees submitted lists of current problems which they felt were sufficiently important in their respective states to justify the expenditure of research and development efforts and funds. Problems which were being given adequate attention, or which were not considered important, were not included on these lists. A master list was compiled from individual lists and reproduced before the conference. At the conference, the cumulated list was reviewed, revised, enlarged, and reorganized.

(2) Conferees from each of the states, caucusing as five separate groups, then decided by majority vote whether or not each problem listed was sufficiently important in their respective states to justify the current expenditure of research and development time and money. A roll call determined the number of states (0-5) that considered each problem "sufficiently important". Categories of 0-5, representing degree of mutual concern about each problem, were thus established.

(3) The conferees from each of the states, re-caucusing as five separate groups, then decided upon the relative importance to their states of problems <u>within</u> each category (0-5) of mutual concern; ranks were assigned by each state. A roll call of the five states yielded the average ranking for each problem within each category of mutual concern.

(4) All the problems in the total list were then re-ranked. Since degree of mutual concern was the primary basis for determining over-all priorities, problems which all states felt to be significant (category 5) received the highest priorities, problems which four states felt to be significant received the next lower level of priorities, etc.

Table 1, presented at the end of this report, lists the problem statements formulated by the conferees, the number of states that felt each problem to be sufficiently significant to warrant current attention, and the final priorities assigned to problems.

D. <u>Selecting and examining a high priority occupational education problem in the Region suitable for planning a region-wide, cooperative R & D project</u>

By majority vote, the conferees selected the first problem in Table 1 for study:

> What are the economic, sociological and psychological criteria for evaluating the success of vocational programs? (a) How can these be measured most validly and reliably? (b) What data collection system should be developed to permit continuous program evaluation? (c) Can criteria and instruments be developed to satisfy institutional self-study as well as "other agency" needs?

The above problem was tied for the highest priority rating; it was deemed suitable for a cooperative, regional investigation; and it has broad implications for

further research. However, in order to insure that the prospective study results have immediate applicability to operating vocational programs, the conferees decided that the problem should not be limited to developing criteria, measures, and methodology but that it should also require these outcomes to be utilized in an actual evaluation of certain aspects of vocational programs. It was, therefore, recommended that the Planning Project Director consider problems four, five and six (in Table 1) in selecting one or more vocational program variables to be evaluated on a regional basis.

E. Appointing a Planning Advisory Committee

The following conferees were selected to form the Planning Advisory Committee: Kenneth M. Wold (Iowa), Jerome Moss, Jr. (Minnesota), Clifton H. Matz (North Dakota), Thomas C. Stone (South Dakota), J. Kenneth Little (Wisconsin). The function of the Committee is to assist, guide and advise the Planning Project Director.

NEXT STEPS

It is now the Planning Project Director's responsibility to prepare a complete, written proposal for a study designed to solve the problem(s) selected by the conferees (Phase II). To accomplish this goal, the Director shall work closely with the Planning Advisory Committee, maintain liaison with the Upper Midwest Regional Educational Laboratory and other interested agencies in the region, and secure the cooperative administrative arrangements necessary to the conduct of a regional study. Funds have already been made available by UMREL for this phase of the project.

After a complete but tentative proposal has been developed, it shall be presented by the Planning Project Director to the reconvened members of the conference, supplemented by representatives of other appropriate organizations, for their approval. This meeting (Phase III) will be held no later than April, 1967. When relevant revisions have been incorporated into the proposal, it shall be submitted to a suitable agency for funding.

It is also hoped that the priority list of problems contained in this report will influence many researchers in the Upper Midwest Region in their selection of problems to study.

Table 1.

A PRIORITY LIST OF CURRENT OCCUPATIONAL EDUCATION PROBLEMS

IN THE UPPER MIDWEST REGION*

Problem Statements	Number of States in which significant	Priority
1. What are the economic, sociological, and psychological criteria for evaluating the success of vocational programs? (a) How can these be measured most validly and reliably? (b) What data collection system should be developed to permit continuous program evaluation? (c) Can criteria and instruments be developed to satisfy institutional self-study as well as "other agency" needs?	5	1.5
2. How and at what educational level(s) can we develop in the student: (a) appropriate work values, (b) receptive attitudes toward change, (c) awareness of personal abilities and interests and how they relate to the world of work, and (d) familiarity with occupations and careers which will provide a basis for making realistic career decisions when and as they need to be made?	5	1.5
3. What are the most satisfactory techniques for recruiting, selecting, preparing, updating and utilizing vocational instructors? (a) What occupational and professional competencies are needed by vocational instructors to perform satisfactorily? (b) How can individuals with occupational competence be encouraged to obtain the professional education needed to perform satisfactorily as teachers? (c) What are the direct and indirect values of requiring work experience, and how long should this experience be? (d) Can cooperative work-study experiences provide adequate occupational competence and values?	5	3
4. What types of vocational education should be provided at: (a) the secondary level, (b) the post-secondary level, and (c) how should these be articulated?	4	4
5. What is the relative effectiveness of different kinds of: (a) pre-vocational education, (b) work experience, and (c) vocational programs on subsequent occupational success and satisfaction?	4	5

*Problems which less then three states considered important were not assigned specific priorities. Where two states believed the problem to be significant it has been included on this list for completeness. Problems felt to be important by only one state have been excluded.

Problem Statements	Number of States in which significant	Priority
6. Are comprehensive post-secondary institutions more efficient organizations for providing vocational programs than specialized institutions?	4	6.5
7. What programs can best serve to recruit, select and train specialists in vocational education? (e.g. administrators, supervisors, researchers, counselors, etc.)	4	6.5
8. What are the current and predicted quantitative needs for occupational training in the region?	4	8
9. How can we standardize occupational curriculums? (a) what are the common elements within occupations and/or between occupations in the region? (b) what type of organization is needed to develop, organize, and disseminate standard curriculums for the region?	4	9
10. What levels and kinds of individual characteristics (e.g. interests, aptitudes, attitudes, etc.) which students bring to vocational programs lend themselves to: (a) efficient training for various occupational groupings, and (b) effective subsequent job performance in various occupational groupings?	4	10
11. What type of occupational education program can we develop in our relatively small secondary schools to prepare students that are low in ability, interest, and motivation for employment?	4	11
12. What programs should be offered to those who are "screened out" of existing vocational programs?	3	12
13. To what extent would controlled experiences in business and industry for counselors and non-vocational teachers assist them in helping youth make more realistic educational and vocational choices?	3	13
14. What factors influence labor force participation and the formation of career development patterns? (e.g. values, work experience, initial failure, formal guidance efforts, social class, education, family, etc.)	3	14.5
15. What changes are needed in vocational and technical education programs to help students who withdraw before completion to make better use of their education in obtaining employment?	3	14.5

Problem Statements	Number of States in which significant	Priority
16. How can dropouts from colleges and universities be helped to: (a) reassess their educational and vocational goals, and (b) enter the work world with marketable occupational skills?	3	16
17. What happens to persons not able to attend existing post-high school institutions?	3	17
18. What factors effect the geographical mobility of our potential trainees and graduates?	3	18
19. What part should the expressed occupational interest of potential students play in developing vocational programs?	2	
20. How can the nature and rate of emerging occupations, and major qualitative changes in existing occupations, be forecast?	2	
21. By what systems has the present work force gained job competencies? (e.g. apprenticeship, on-the-job, public schools, etc.)	2	
22. What methods can be devised to analyze occupations or occupational clusters to yield the technical, psychological and sociological requirements for job satisfaction and satisfactoriness?	2	
23. To what extent should content for immediate vs. long-range career goals be emphasized? At what level of generality should selected content be provided? What principles of content organization and arrangement maximizes its transfer value?	2	
24. What is the most efficient administrative pattern and organization within a school district for operating area vocational and technical schools?	2	
25. How can the economic return to society of training for a given occupation be computed?	2	
26. How effective are youth club organizations and activities?		
27. What is the most effective means for encouraging educational innovation based upon the results of research?	2	